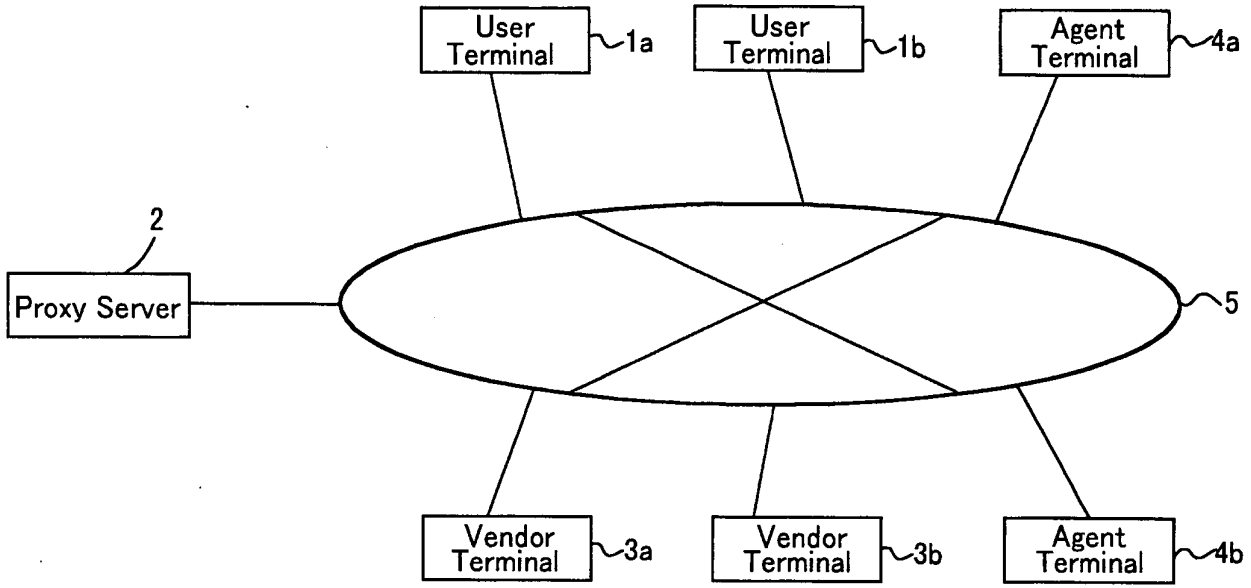
User Terminal
1a
User Terminal
1b
Agent Terminal
4a
2
Proxy Server
5
Vendor Terminal
3a
Vendor Terminal
3b
Agent Terminal
4b

Fig. 1

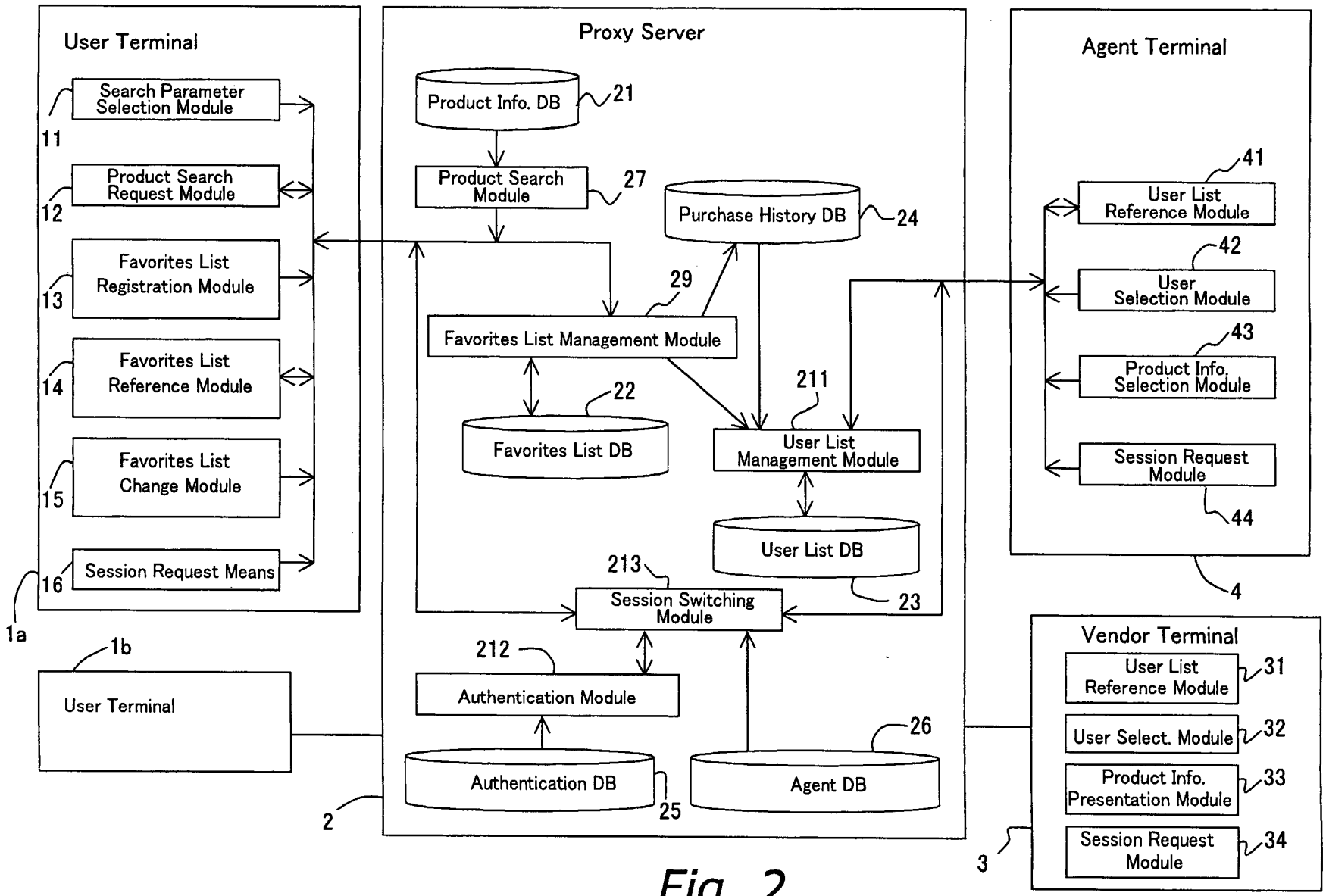
User Terminal
Search Parameter Selection Module
11
Product Search Request Module
12
Favorites List Registration Module
13
Favorites List Reference Module
14
Favorites List Change Module
15
Session Request Means
16
1a
1b
User Terminal
Proxy Server
Product Info. DB
21
Product Search Module
27
Purchase History DB
24
29
Favorites List Management Module
22
Favorites List DB
211
User List Management Module
User List DB
23
213
Session Switching Module
212
Authentication Module
Authentication DB
25
26
Agent DB
2
Agent Terminal
41
User List Reference Module
42
User Selection Module
43
Product Info. Selection Module
Session Request Module
44
4
Vendor Terminal
User List Reference Module
31
User Select. Module
32
Product Info. Presentation Module
33
Session Request Module
34
3

Fig. 2

Region Master Table

Region	Region ID
Hokkaidou	1
Touhoku	2
Kanto/Koshinetsu	3
Chuubu	4
Kinki	5

Fig. 3A

Recommendation Info. Master Table

Search Parameter ID	Search Parameter Items
1	Food
2	Facilities
3	View
4	Service
5	Outdoor Hot Spring Included
6	Room Service Available

Fig. 3B

Inventory Control Table

Vendor ID (Product ID)	Date	Number of Empty Rooms
vendor-B	2001-04-01	13
vendor-B	2001-04-02	10
vendor-B	2001-04-03	6
vendor-F	2001-04-01	3
vendor-F	2001-04-02	5
⋮	⋮	⋮

Fig. 3C

Product Information Table

Vendor ID (Product ID)	Hotel Name	Region ID	Address	Recommendation Info.	Hotel Introduction	Detailed URL
vendor-B	B Hotel	5	Arima, Hyogo Prefecture	1, 5	Kansai's Guest Room	Http://www.hotelB.com
vendor-F	F Hotel	5	Hikone, Shiga Prefecture	2, 3, 6	Lakefront Inn in Hikone, a Castle and Port Town	Http://www.hotelF.com
⋮	⋮	⋮	⋮	⋮	⋮	⋮

Fig. 3D

Search Parameter Table

User ID	Search Parameter ID	Parameter Data
0001u	1	April 20, 2001, 3 Nights
0001u	2	2 Persons
0001u	3	Kinki Region
0001u	4	NULL
0002u	⋮	⋮
0003u	⋮	⋮

Fig. 4A

Search Parameter Master Table

Search Parameter ID	Search Parameters
1	Check-In Date Selected
2	Number of Adults
3	Region
4	Bath and Toilet Included
5	Outdoor Hot Spring Included
6	Room Service Available
7	Food
8	View

Fig. 4B

Favorites List Table

User ID	Vendor ID (Product ID)	Date of Registration	Date Updated	Product Name	Detailed URL	Display Info.	Public Flag
0001u	vendor-B	2001-02-01	2001-02-01	Hotel B	Http://www.hotelB.com	There are few rooms remaining. Please make a reservation as soon as possible. (Expiration date 3/1/2001).	T
0001u	vendor-F	2001-03-02	2001-03-02	Hotel F	Http://www.hotelF.com	Please input the check-in date and the number of adults. Free plan quote provided. (Expiration date 4/20/2001).	T
0002u	vendor-A	2001-04-22	2001-04-22	Hotel F	Http://www.hotelF.com	Room with an excellent view one night (2 meals included) will be ¥14,000	T
0003u	vendor-C	2001-03-31	2001-04-15	Hotel C	Http://www.hotelC.com		F

Fig. 4C

Search Parameter Table

User ID	Search Parameter ID	Parameter Data
0001u	1	April 20, 2001, 3 Nights
0001u	2	2 Persons
0001u	3	Kinki Region
⋮	⋮	⋮
0002u	⋮	⋮
0003u	⋮	⋮

Fig. 5A

User List Table

Vendor ID (Product ID)	User ID	Date of Registration	Date Updated	Display Info.	Number of Times Used	Reservation Number
vendor-B	0001u	February 1, 2001	February 1, 2001	There are few rooms remaining. Please make a reservation as soon as possible. (Expiration date 3/1/2001).	0	NULL
	0076u	March 9, 2001	March 9, 2001	NULL	1	NULL
	0108u	⋮	⋮	⋮	3	RN-2001-012-183720
vendor-F	⋮	⋮	⋮	⋮	⋮	⋮

Fig. 5B

Reservation Number (Payment ID)	Vendor ID	Date and Time Issued	Reservation Details	User ID Issued to
RN-2001-012-183720	vendor-B	February 14, 2001, 3:30	2001/4/20-22 Two Adults	0001u
RN-2001-013-90820	vendor-A	March 11, 2001, 1:15	2001/05/15-16 Two Adults	0001u
⋮	⋮	⋮	⋮	⋮

Fig. 6

User Table

User ID	Password
0001u	****
0002u	*****
⋮	⋮

Fig. 7A

Vendor Table

Vendor ID	Password
vendor–A	***
vendor–B	*****
⋮	⋮

Fig. 7B

Agent Table

Agent ID	Password
CS–001	****
CS–002	******
⋮	⋮

Fig. 7C

Vendor ID	Agent ID	Agent Parameters	Agent Mode
vendor-B	CS-002	23:00 - 8:00	NULL
vendor-C	CS-001	NULL	ALWAYS
vendor-D	CS-059	vendor=OFFLINE	NULL

Fig. 8

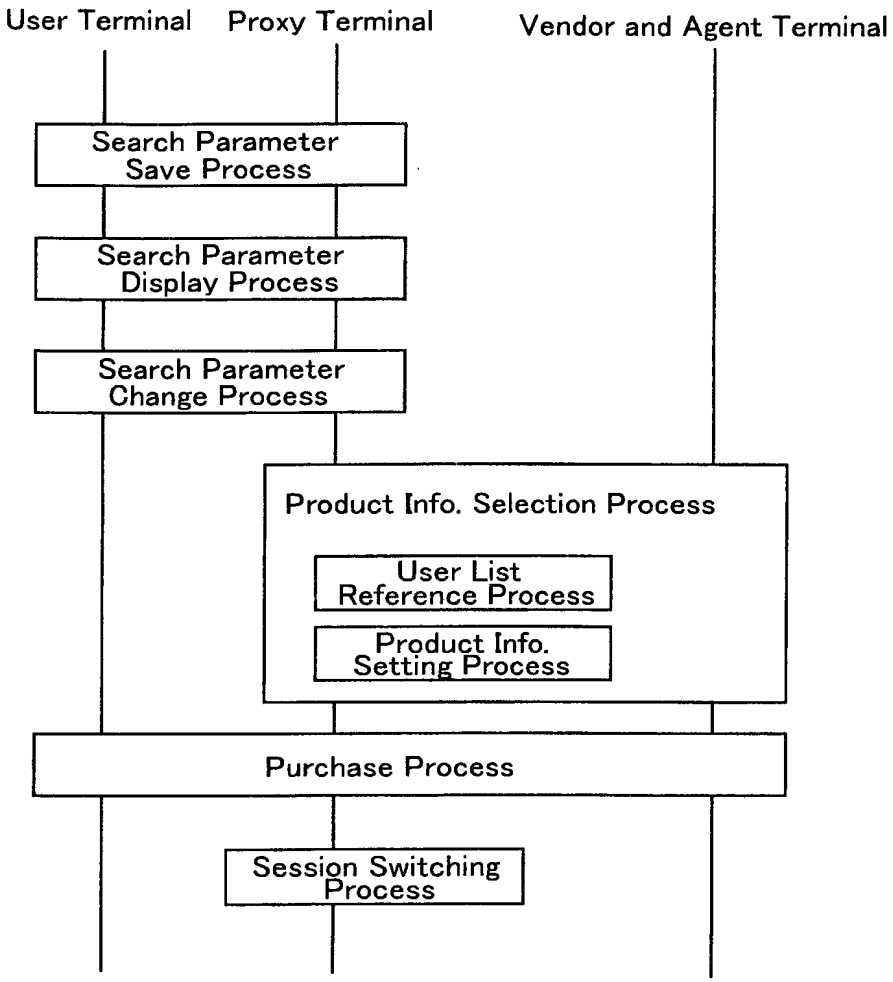
User Terminal
Proxy Terminal
Vendor and Agent Terminal
Search Parameter Save Process
Search Parameter Display Process
Search Parameter Change Process
Product Info. Selection Process
User List Reference Process
Product Info. Setting Process
Purchase Process
Session Switching Process

Fig. 9

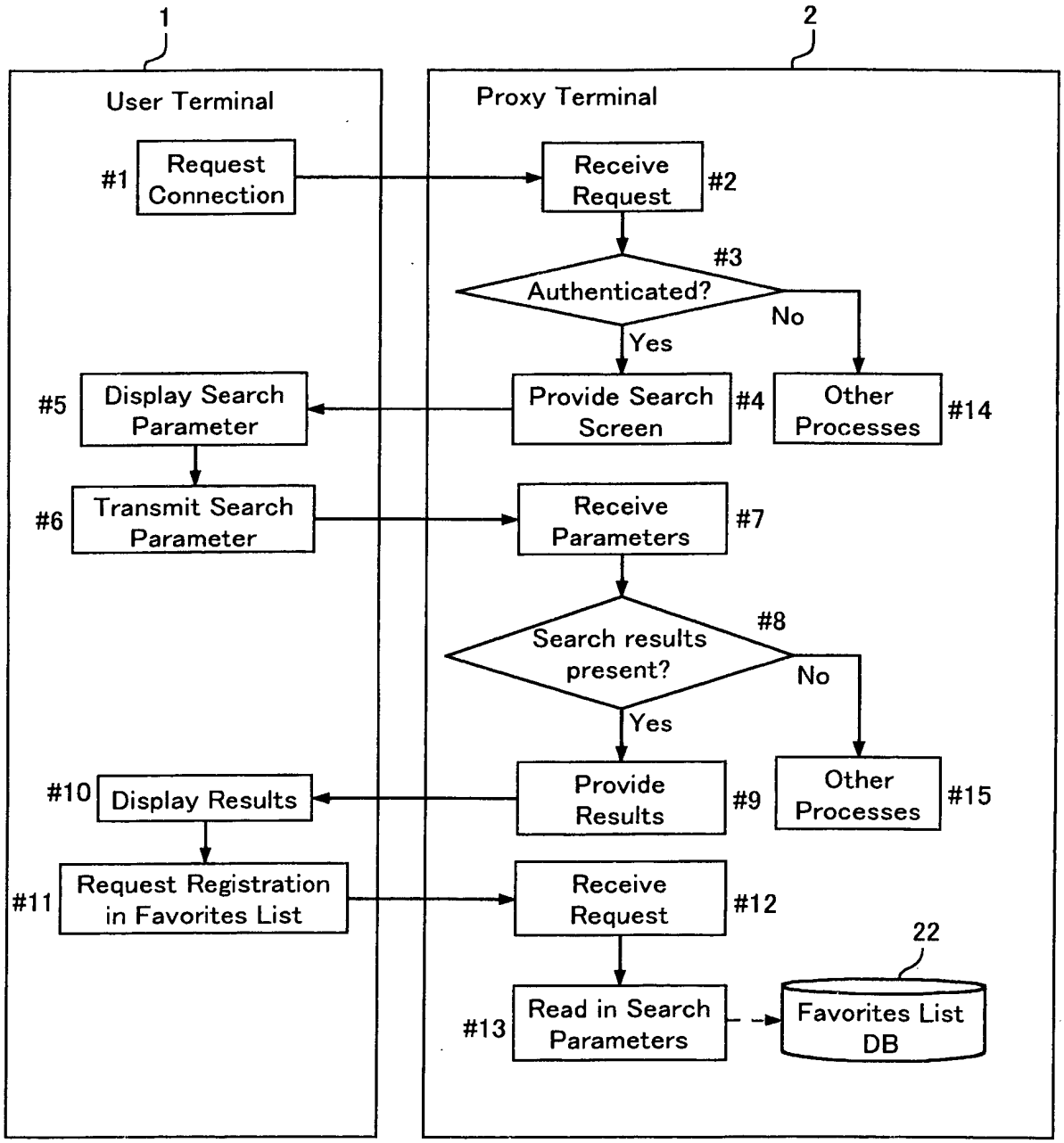
1
2
User Terminal
Proxy Terminal
#1
Request Connection
Receive Request
#2
#3
Authenticated?
No
Yes
#5
Display Search Parameter
Provide Search Screen
#4
Other Processes
#14
#6
Transmit Search Parameter
Receive Parameters
#7
#8
Search results present?
No
Yes
#10
Display Results
Provide Results
#9
Other Processes
#15
#11
Request Registration in Favorites List
Receive Request
#12
22
#13
Read in Search Parameters
Favorites List DB

Fig. 10

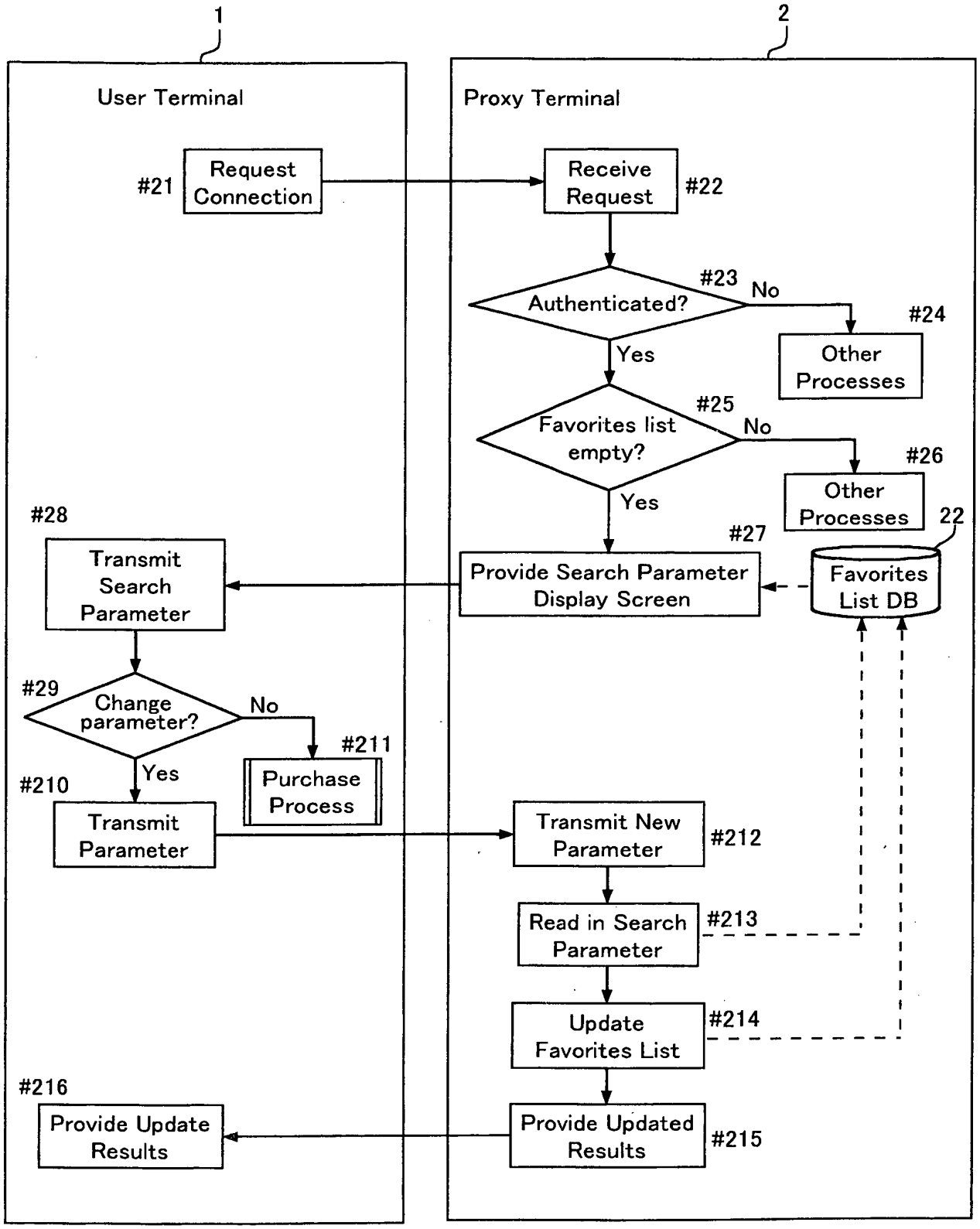
1
2
User Terminal
Proxy Terminal
#21
Request Connection
Receive Request
#22
#23
Authenticated?
No
#24
Other Processes
Yes
#25
Favorites list empty?
No
#26
Other Processes
Yes
22
#27
Favorites List DB
#28
Transmit Search Parameter
Provide Search Parameter Display Screen
#29
Change parameter?
No
#211
Purchase Process
Yes
#210
Transmit Parameter
Transmit New Parameter
#212
Read in Search Parameter
#213
Update Favorites List
#214
#216
Provide Update Results
Provide Updated Results
#215

Fig. 11

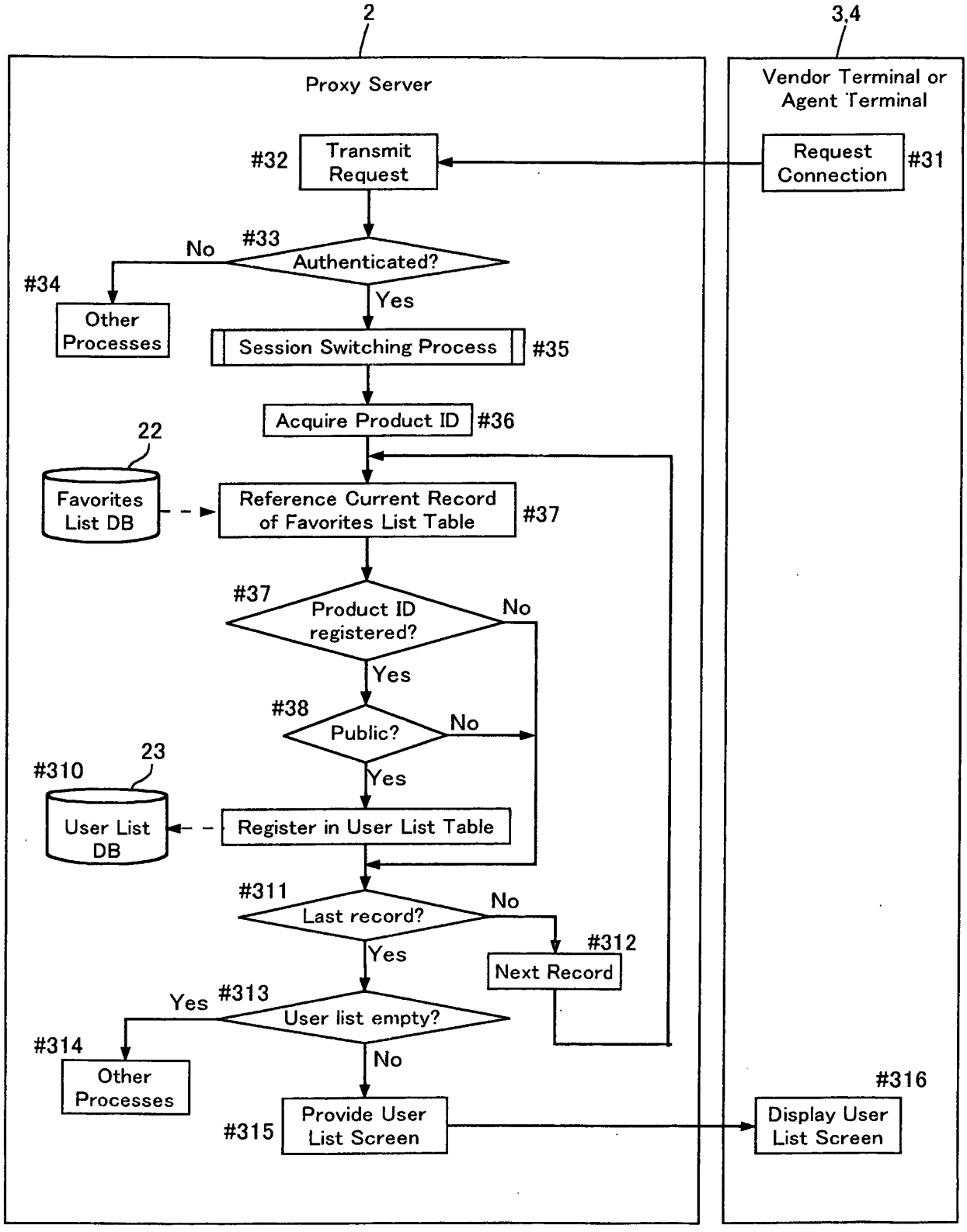
2
3,4
Proxy Server
Vendor Terminal or Agent Terminal
#32
Transmit Request
Request Connection
#31
No
#33
Authenticated?
#34
Other Processes
Yes
Session Switching Process
#35
Acquire Product ID
#36
22
Favorites List DB
Reference Current Record of Favorites List Table
#37
#37
Product ID registered?
No
Yes
#38
Public?
No
Yes
#310
23
User List DB
Register in User List Table
#311
Last record?
No
Yes
#312
Next Record
Yes
#313
User list empty?
#314
Other Processes
No
#316
#315
Provide User List Screen
Display User List Screen

Fig. 12

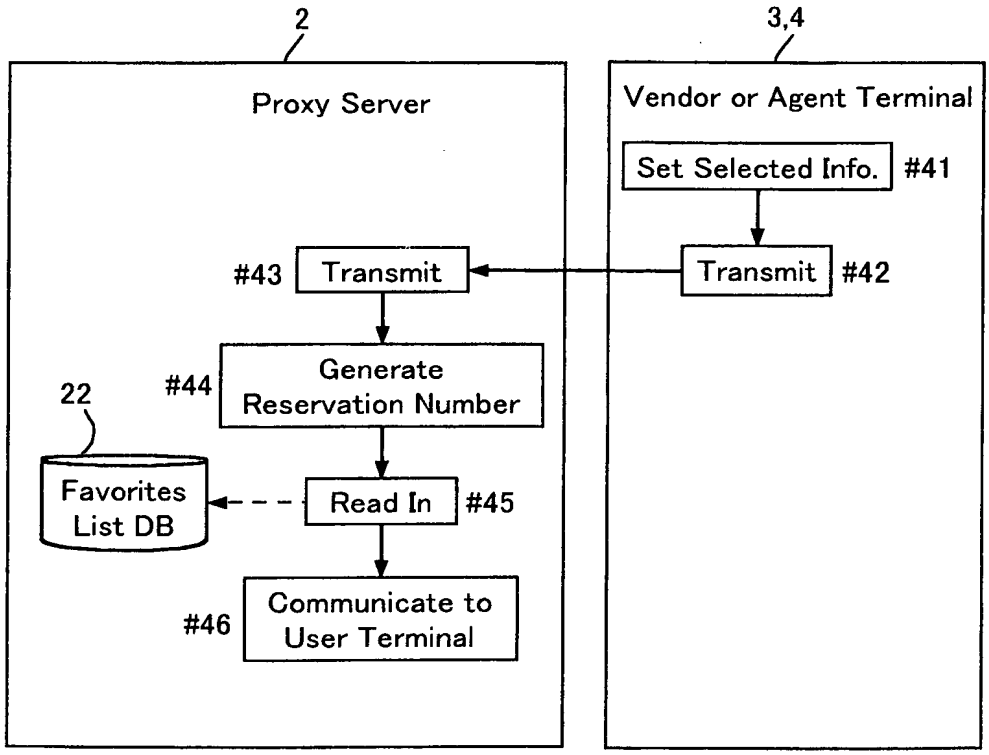
2
3,4
Proxy Server
Vendor or Agent Terminal
Set Selected Info.
#41
Transmit
#42
#43
Transmit
Generate
Reservation Number
#44
22
Favorites
List DB
Read In
#45
Communicate to
User Terminal
#46

Fig. 13

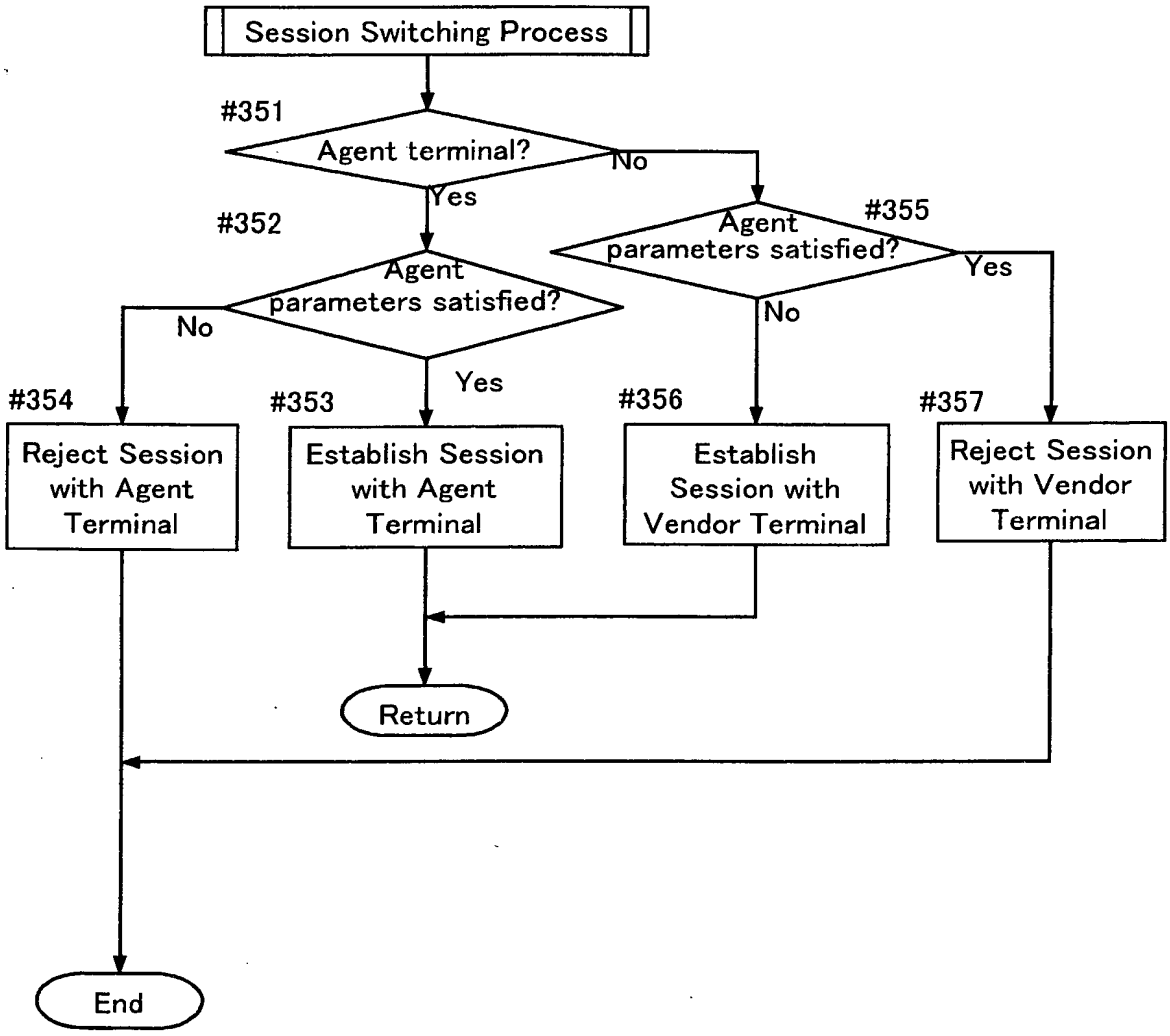
Session Switching Process
#351
Agent terminal?
No
Yes
#352
Agent parameters satisfied?
No
Yes
#355
Agent parameters satisfied?
Yes
No
#354
Reject Session with Agent Terminal
#353
Establish Session with Agent Terminal
#356
Establish Session with Vendor Terminal
#357
Reject Session with Vendor Terminal
Return
End

Fig. 14

T06T60" 6h0595660

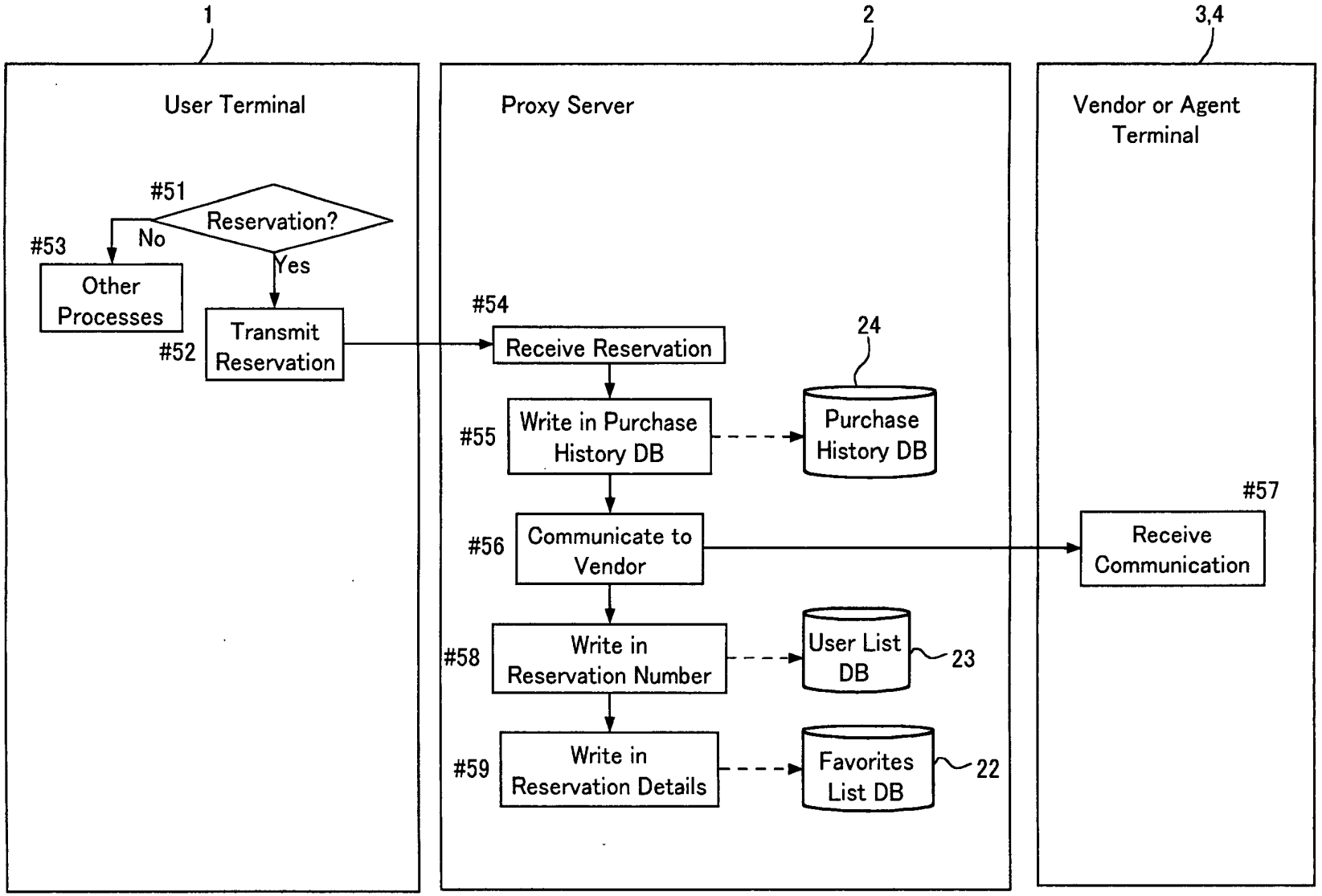

Fig. 15

TOKYO 6105660

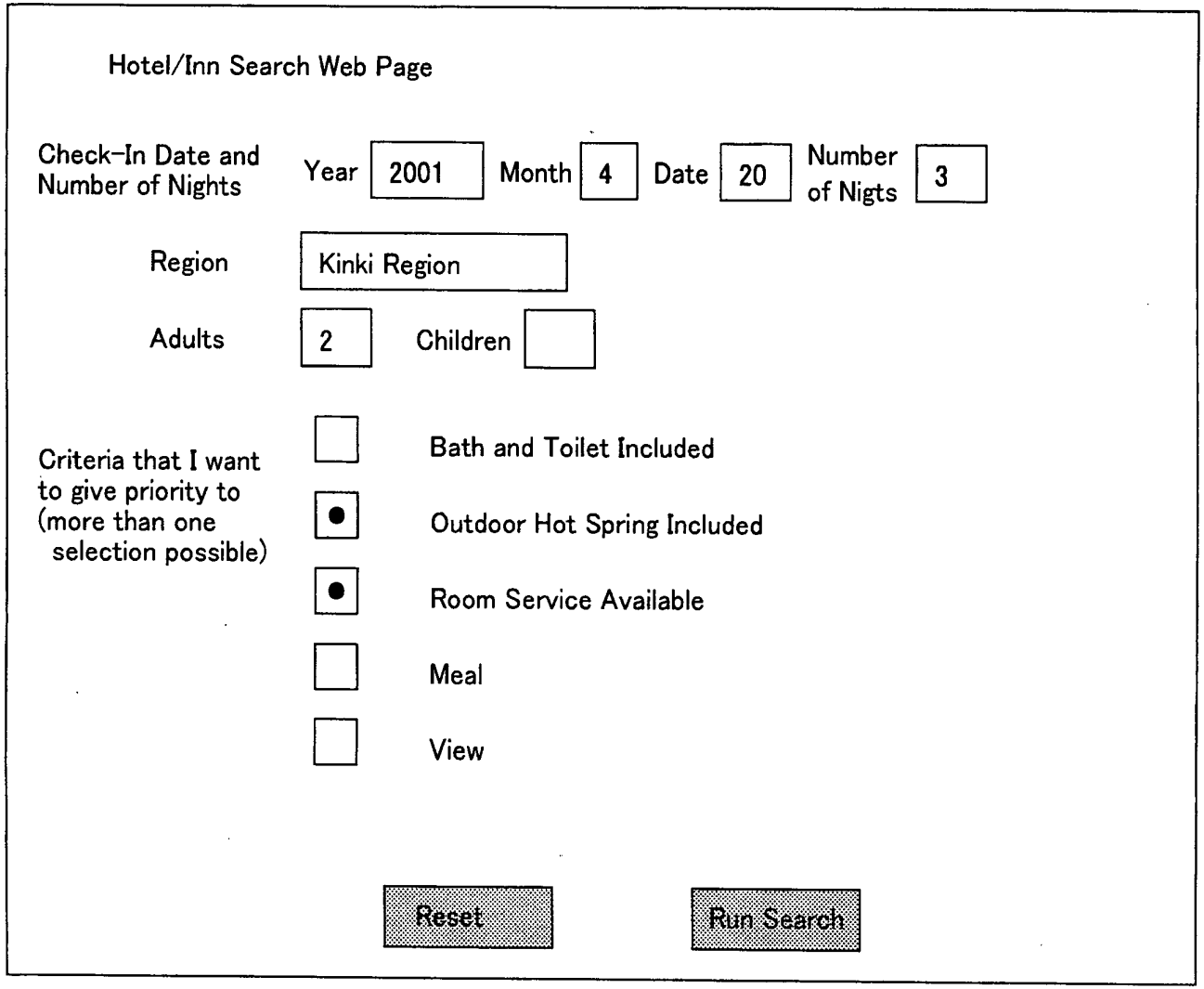

Fig. 16

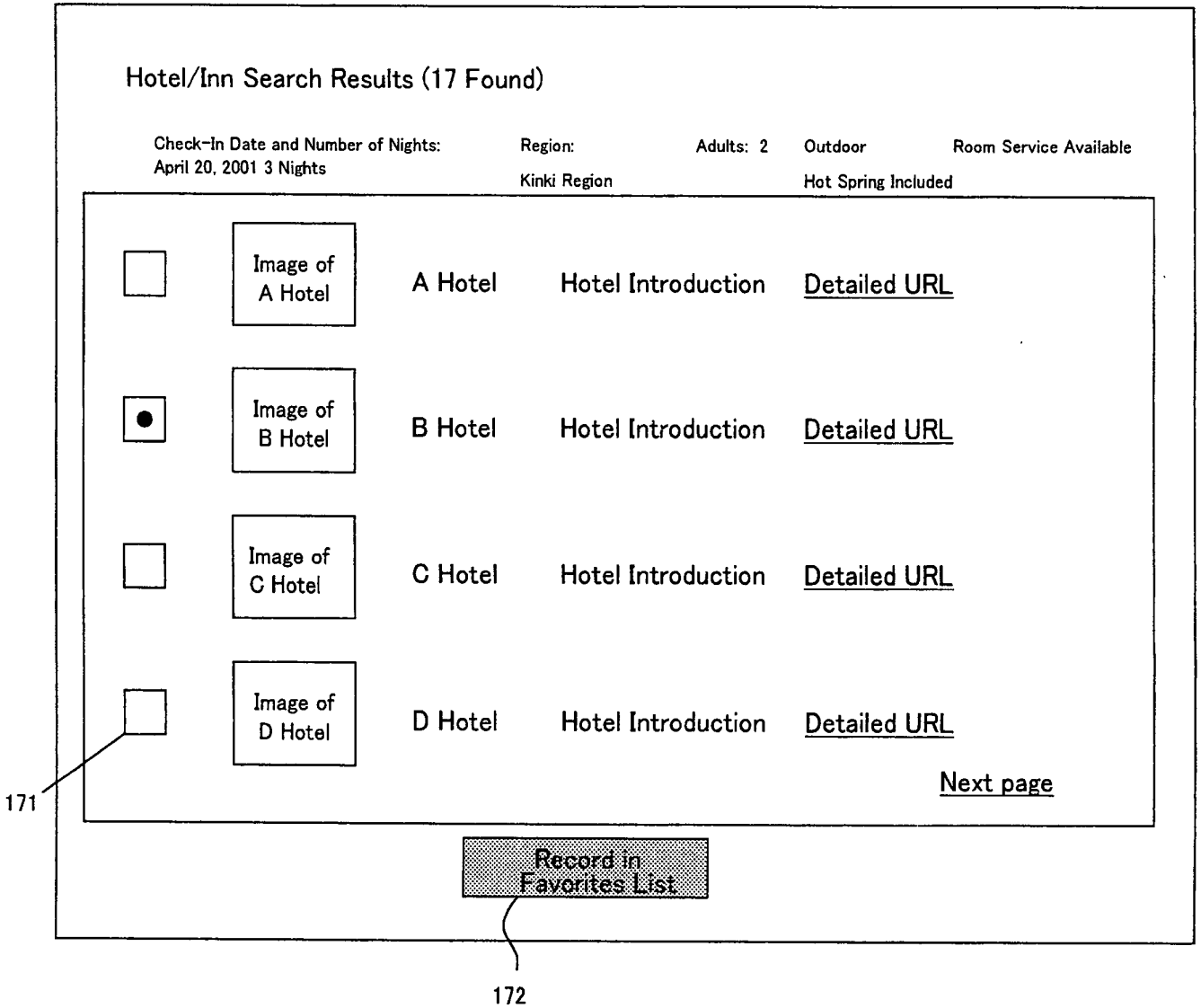
Hotel/Inn Search Results (17 Found)
Check-In Date and Number of Nights:
April 20, 2001 3 Nights
Region:
Kinki Region
Adults: 2
Outdoor
Hot Spring Included
Room Service Available
Image of A Hotel
A Hotel
Hotel Introduction
Detailed URL
Image of B Hotel
B Hotel
Hotel Introduction
Detailed URL
Image of C Hotel
C Hotel
Hotel Introduction
Detailed URL
Image of D Hotel
D Hotel
Hotel Introduction
Detailed URL
Next page
171
Record in Favorites List
172

Fig. 17

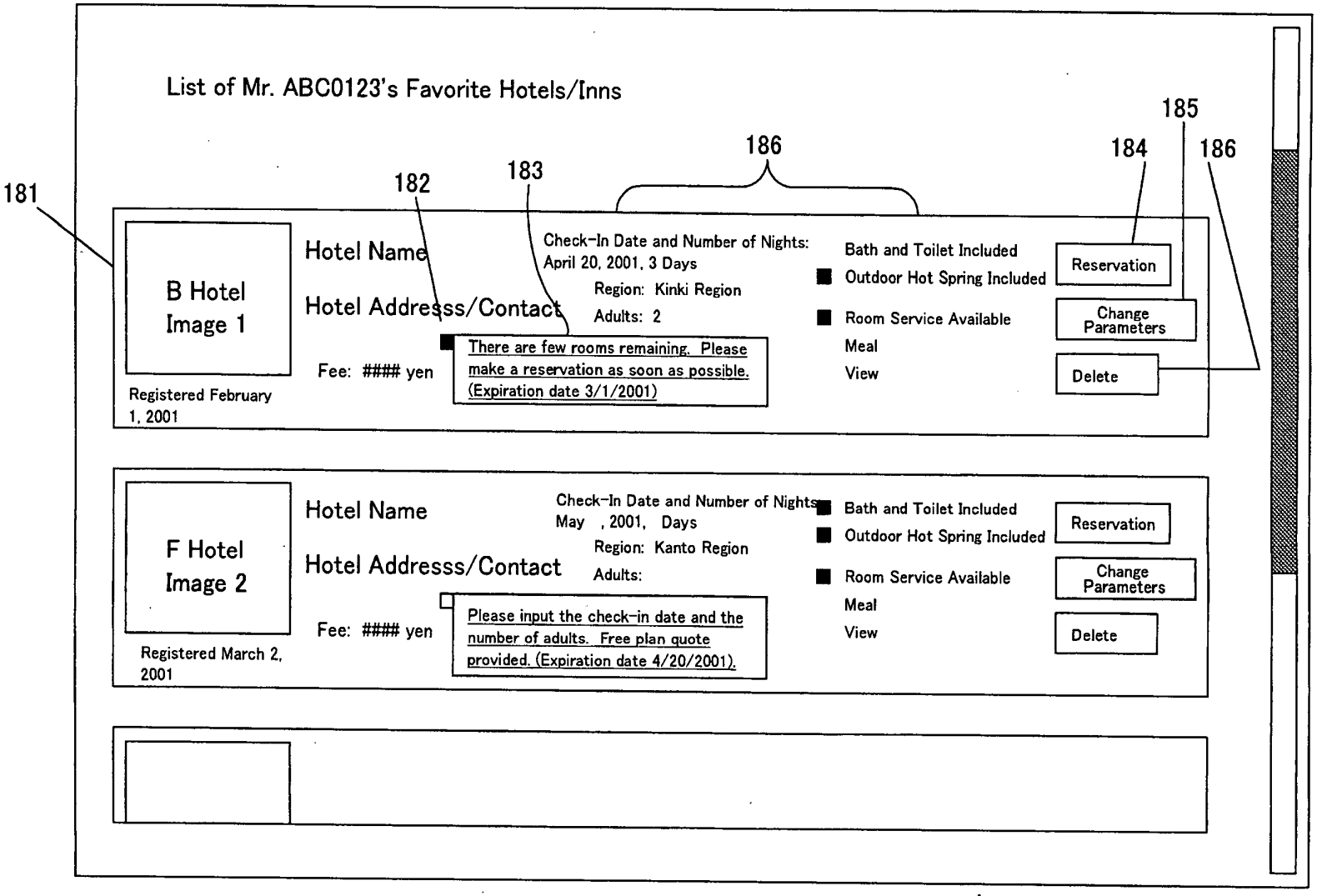
List of Mr. ABC0123's Favorite Hotels/Inns
181
182
183
186
184
185
186
B Hotel Image 1
Hotel Name
Hotel Addresss/Contact
Check-In Date and Number of Nights: April 20, 2001, 3 Days
Region: Kinki Region
Adults: 2
There are few rooms remaining. Please make a reservation as soon as possible. (Expiration date 3/1/2001)
Fee: #### yen
Registered February 1, 2001
Bath and Toilet Included
Outdoor Hot Spring Included
Room Service Available
Meal
View
Reservation
Change Parameters
Delete
F Hotel Image 2
Hotel Name
Hotel Addresss/Contact
Check-In Date and Number of Nights: May , 2001, Days
Region: Kanto Region
Adults:
Please input the check-in date and the number of adults. Free plan quote provided. (Expiration date 4/20/2001).
Fee: #### yen
Registered March 2, 2001
Bath and Toilet Included
Outdoor Hot Spring Included
Room Service Available
Meal
View
Reservation
Change Parameters
Delete

Fig. 18

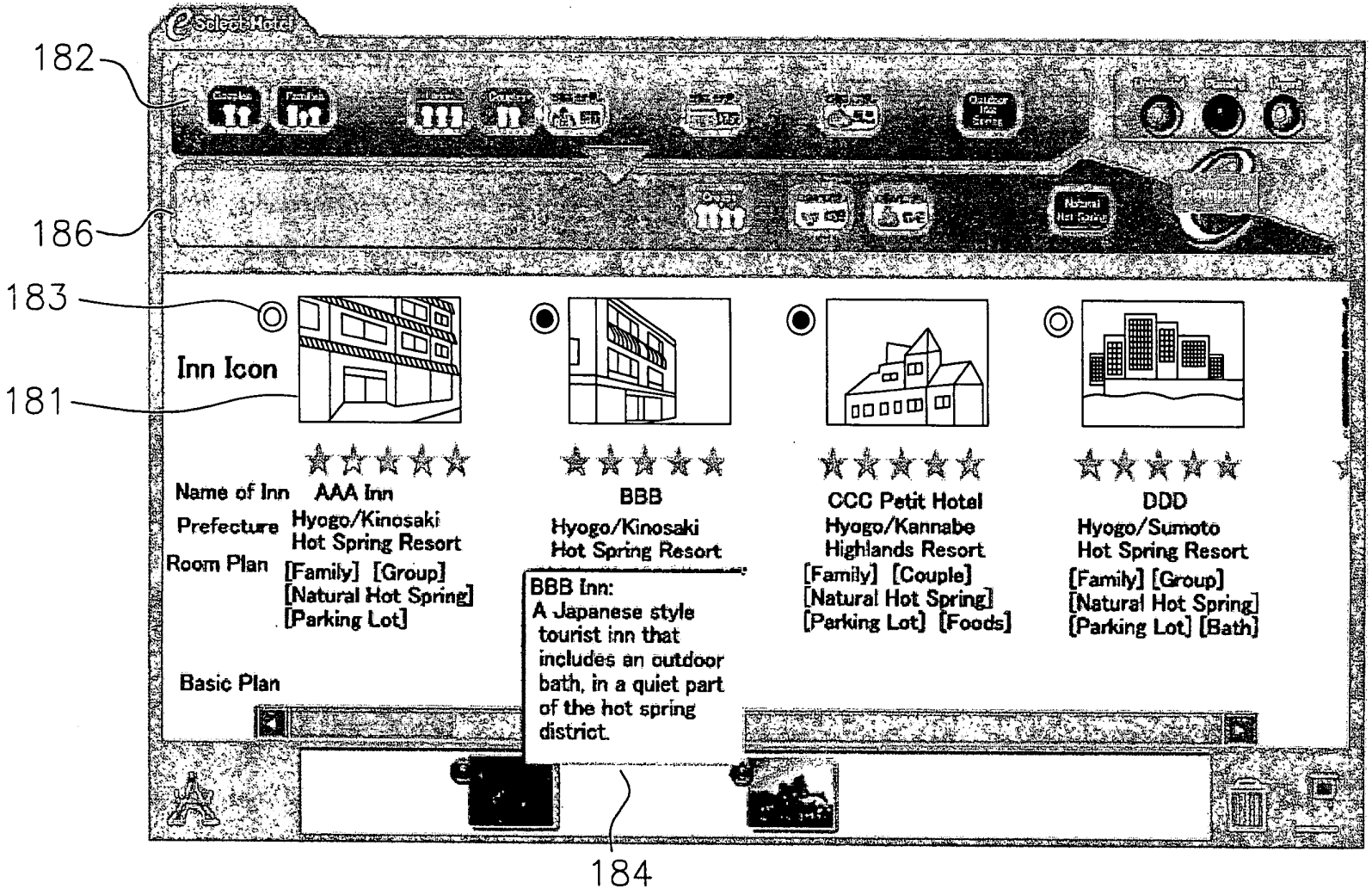
182
186
183
Inn Icon
181
Name of Inn
Prefecture
Room Plan
Basic Plan
AAA Inn
Hyogo/Kinosaki
Hot Spring Resort
[Family] [Group]
[Natural Hot Spring]
[Parking Lot]
BBB
Hyogo/Kinosaki
Hot Spring Resort
BBB Inn:
A Japanese style tourist inn that includes an outdoor bath, in a quiet part of the hot spring district.
CCC Petit Hotel
Hyogo/Kannabe
Highlands Resort
[Family] [Couple]
[Natural Hot Spring]
[Parking Lot] [Foods]
DDD
Hyogo/Sumoto
Hot Spring Resort
[Family] [Group]
[Natural Hot Spring]
[Parking Lot] [Bath]
184

Fig. 19

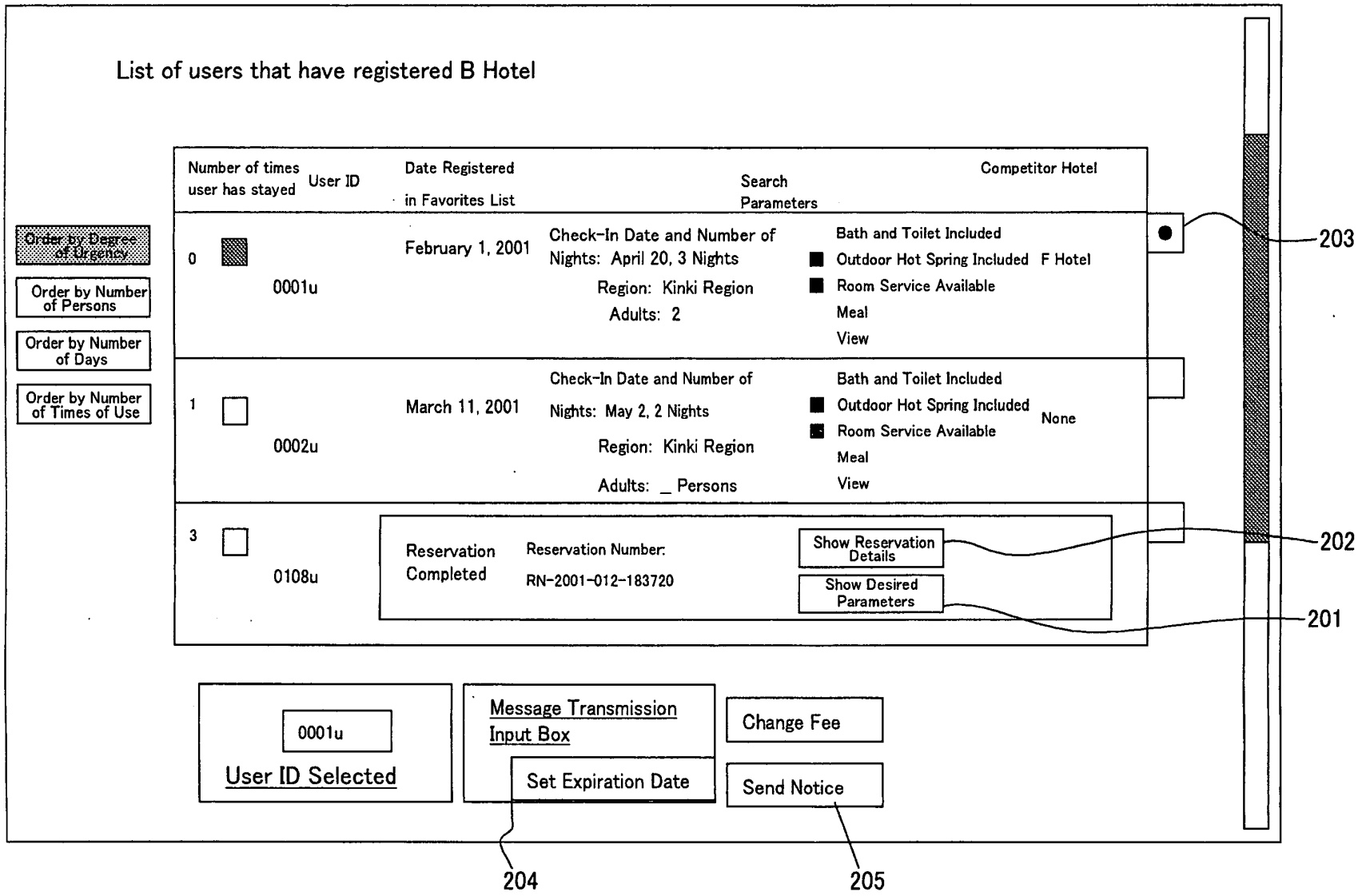
List of users that have registered B Hotel
Order by Degree of Urgency
Order by Number of Persons
Order by Number of Days
Order by Number of Times of Use
Number of times user has stayed
User ID
Date Registered in Favorites List
Search Parameters
Competitor Hotel
0
0001u
February 1, 2001
Check-In Date and Number of Nights: April 20, 3 Nights
Region: Kinki Region
Adults: 2
Bath and Toilet Included
Outdoor Hot Spring Included
Room Service Available
Meal
View
F Hotel
1
0002u
March 11, 2001
Check-In Date and Number of Nights: May 2, 2 Nights
Region: Kinki Region
Adults: _ Persons
Bath and Toilet Included
Outdoor Hot Spring Included
Room Service Available
Meal
View
None
3
0108u
Reservation Completed
Reservation Number:
RN-2001-012-183720
Show Reservation Details
Show Desired Parameters
0001u
User ID Selected
Message Transmission Input Box
Set Expiration Date
Change Fee
Send Notice
203
202
201
204
205

Fig. 20

Region Master Table

Region	Region ID
Hokkaidou	1
Touhoku	2
Kanto	3
Chuubu	4
Kinki	5
⋮	⋮

Fig. 21A

Inventory Control Master Table

Vendor ID	Product ID
vendor – A	house0001
	house0002
	⋮
	office0001
	office0002
	⋮
vendor – B	house0001
	house0002
⋮	⋮

Fig. 21B

Recommendation Info. Master Table

Search Parameter ID	Search Parameter
1	Convenient Commute
2	View
3	Quiet
4	School District
5	Sunlight
6	Renovation Completed
⋮	⋮

Fig. 21C

Product Information Table

Vendor ID	Product ID	Region ID	Recommendation Info.	Product Introduction	Detailed URL
vendor – A	house0001	5	1,6	One Minute on Foot from Train Station	http://www.house0001.com
	house0002	5	2,3,4,5	Quiet Residential Area	http://www.house0002.com
⋮	⋮	⋮	⋮	⋮	⋮

Fig. 21D